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DIRECTORATE OF
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Imagery Analysis Service Notes

7 February 1969

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This publication highlights significant or timely intelligence items derived from photography.

The interpretations in this publication represent preliminary views which are subject to modification in the light of further information and more complete analysis.

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CENTRAL INTELLIGENCE AGENCY
Directorate of Intelligence
Imagery Analysis Service

IMAGERY ANALYSIS SERVICE NOTES NO. 4/69

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USSR

SS-13 Missile Ground Support Equipment

IAS has determined the probable method by which the Soviets use specialized ground support equipment (GSE) to handle and load the SS-13 missile. Our analysis is based on a study of equipment seen on satellite photography at Launch Site II, Plesetsk Missile and Space Center and equipment shown in a Soviet film which was probably made at Site II. (The Soviet film was shown on Moscow television in early 1968.) The SS-13 GSE set contains two missile transporter/loaders with prime movers (see Figure 1). It also includes a warhead van and warhead handling crane, missile checkout and test vans, missile support and shop vans, and a generator trailer.

The SS-13, formerly designated the KY-6, is a three stage, solid-propellant ICBM which began R&D at Kapustin Yar, was later transferred to Plesetsk for test firing to ICBM ranges, and is now being deployed at the Yoshkar-Ola ICBM complex. A probable SS-13 prototype, designated the SAVAGE, appeared in the May 1965 Moscow parade (see Figure 2).

The SS-13 missile transporter/loader (T/L) consists of a reinforced steel cylinder with a cone-shaped forward portion. It is approximately 50 feet long and 10 feet in diameter. Two T/L's, called Units A and B for purposes of this discussion, are required to load a single SS-13 missile into its silo. They appear identical in external configuration but differ in their internal fittings and missile handling fixtures.

Unit A transports, erects, and loads the first stage of the SS-13. The first stage is just under 30 feet long, and with its handling fixture attached it occupies approximately 35 feet of the T/L's 50-foot length. Unit B transports, erects, and loads the assembled second and third stages of the missile. The open framework interstage which connects the first and second stages is probably carried attached to the base of the second stage. The components carried in Unit B are about [] long, and with handling fixtures attached also occupy about 35 feet of the T/L's length. The cone-shaped forward portion of the T/L, which reduces to about four feet in diameter, probably contains environmental control and handling equipment. The parts of the missile are thus carried separately to the silo, and are mated to form a complete missile as they are loaded into the silo.

This handling concept is compatible with the theory of modular assembly and common elements postulated for the Soviet solid-propellant missile programs. The components of the SS-13 carried in Unit B make up the essential parts of the SS-14 MRBM. The probable prototype for the SS-14 is the SCAMP,

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SOVIET TV FILM; EARLY 1968.

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LINE DRAWINGS.

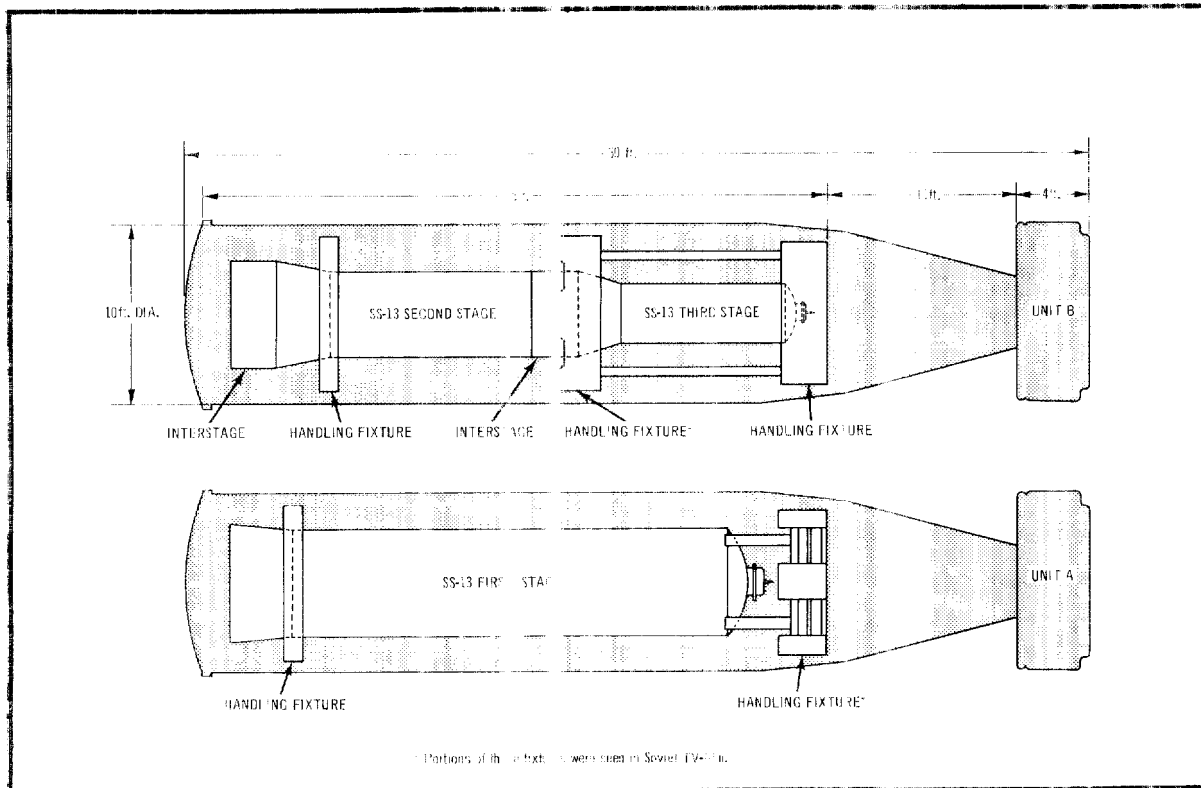


FIGURE 1. SS-13 TRANSPORTER/LOADERS.

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shown in Figure 3. The SS-13 T/L is also probably capable of handling the missile's first and third stages which could make up a solid-propellant IRBM. Therefore, identification of this T/L in the future will not by itself indicate which of the several candidate missile systems is involved.

SS-13 ground support equipment and this handling concept will be discussed in more detail in a forthcoming Imagery Analysis Memorandum.

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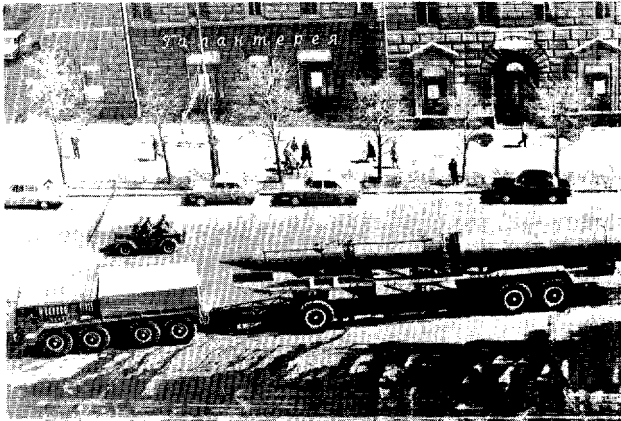


FIGURE 2. SAVAGE (PROBABLE SS-13 PROTOTYPE),
MOSCOW PARADE, MAY 1968.

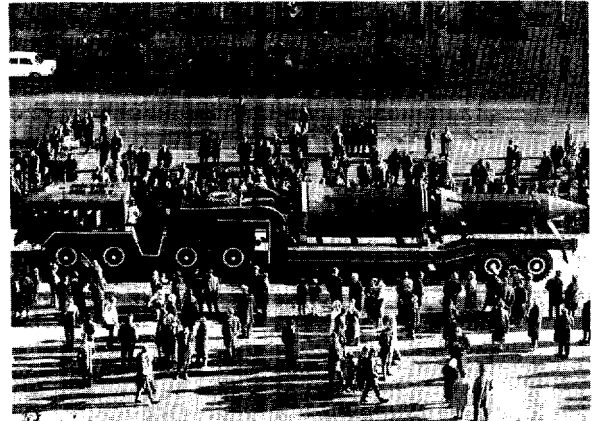


FIGURE 3. SCAMP (PROBABLE SS-14 PROTOTYPE),
MOSCOW PARADE, NOVEMBER 1967.

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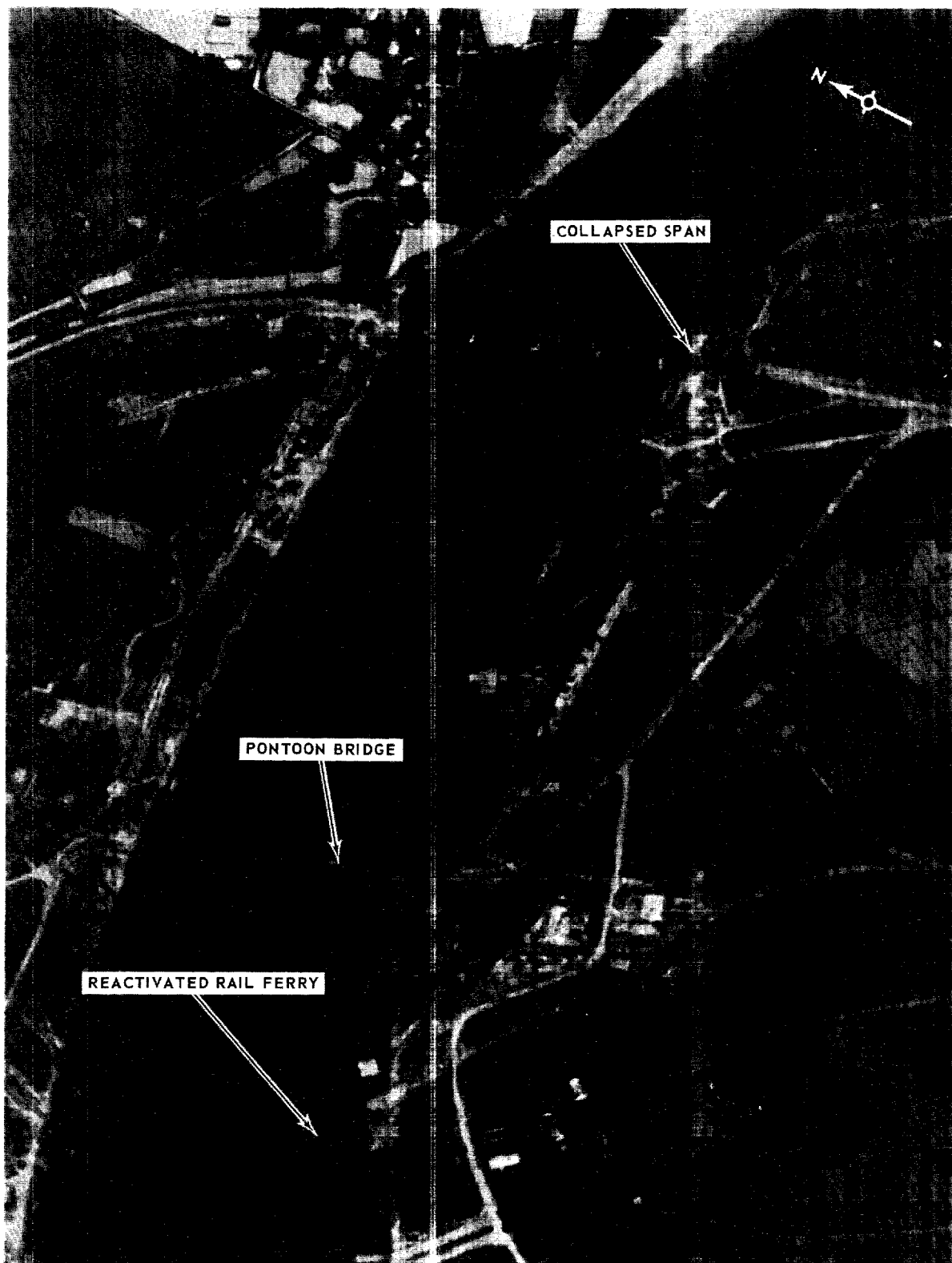


FIGURE 4. VIET TRI RAIL BRIDGE, [REDACTED]

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NORTH VIETNAM

Hanoi-Lao Cai Rail Line Closed to Through Traffic

25X1D The Hanoi-Lao Cai Rail Line linking North Vietnam and China's Yunnan Province is again closed to through traffic. GIANT SCALE photography of [] shows that the largest span of the Viet Tri rail bridge has collapsed. A nearby ferry has been reactivated to service rail traffic. (See Figure 4.)

The Viet Tri bridge was serviceable on [] for the first time in over two years. In its repaired state the bridge consisted of five new spans and one 250-foot end span that remained from the original bridge, which had been destroyed by air strikes. One end of this original span has collapsed into the water, apparently because of structural failure. It will probably require three to six weeks to perform the necessary repairs.

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NORTH VIETNAM

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Construction of Air Raid Shelters in the Haiphong Port Area

Air raid shelter construction is continuing in North Vietnam despite the bombing halt. Since [REDACTED] three large new shelters have been built in the port of Haiphong. This is the first time that large air raid shelters have been built in this wharf area. They are located in space formerly used for open storage of cargo.

The new shelters are partially underground and are of concrete construction, with entrances at each end protected by blast walls (see example in Figure 5). Two of the shelters measure 40 by 35 feet, and the other is [REDACTED] feet.

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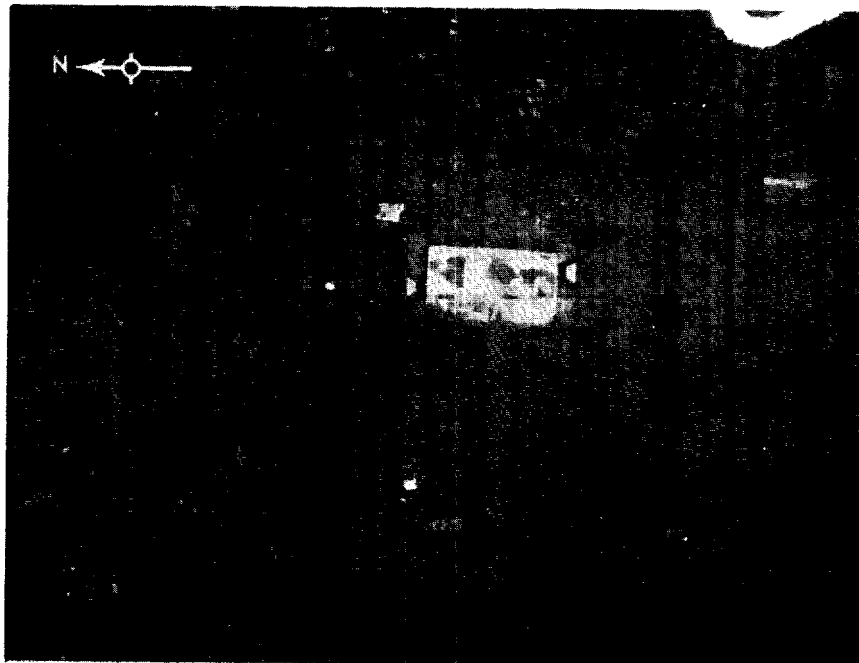
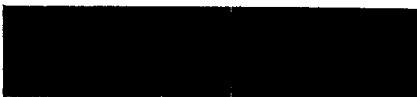


FIGURE 5. AIR RAID SHELTER IN MALL AREA A, HAIPHONG PORT,

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